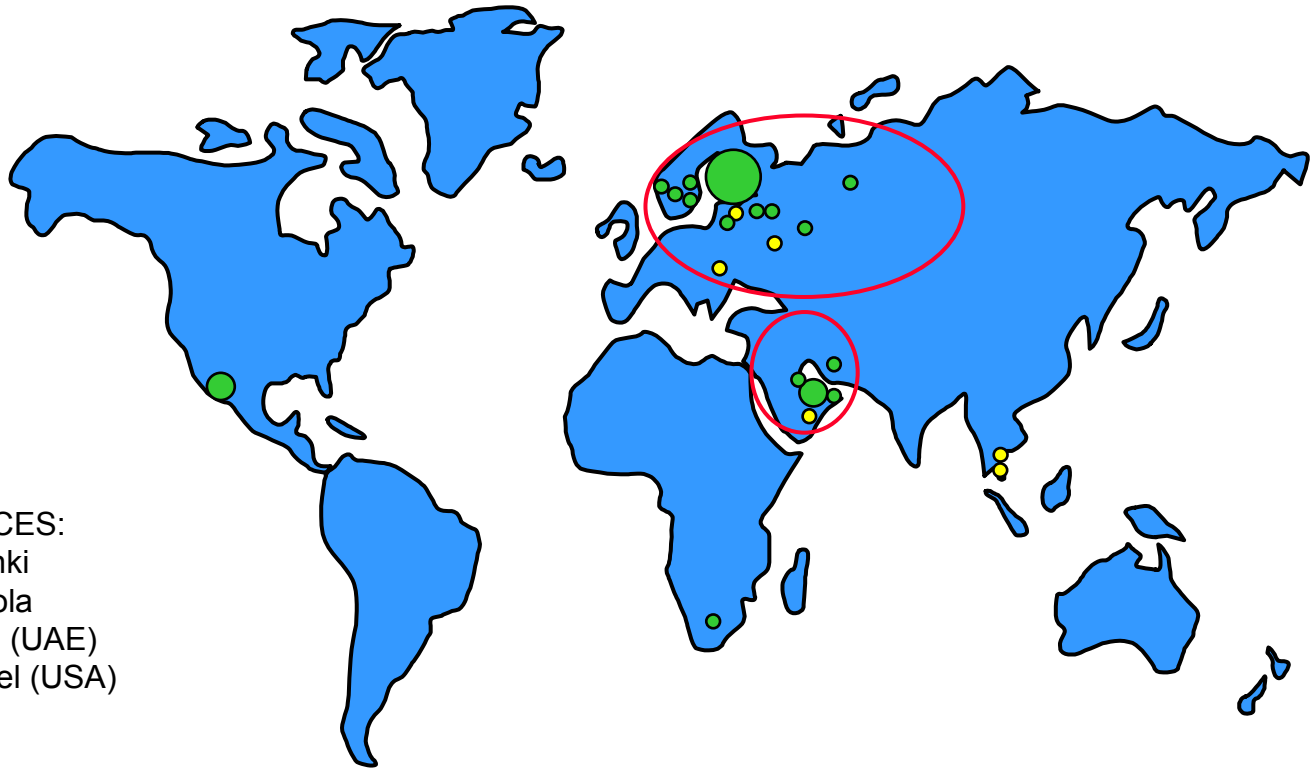
Lonix
www.lonix.com

# Core technologies for intelligent buildings


Open, integrated systems
with distributed intelligence
since 1996

Building Connectivity

# Building connectivity globally



OFFICES:
Helsinki
Kouvola
Dubai (UAE)
Carmel (USA)

REPRESENTATIVES:

| | |
|---|---|
| Sweden | 2 |
| Norway | 2 |
| Russia | 3 |
| Latvia | 1 |
| UAE | 2 |
| Bahrain | 1 |
| Iran | |
| Qatar | |
| South Africa | |

Estonia
Ukraina
Singapore
Saudi-Arabia
Malaysia
Romania

# Where has open technology been applied?

- Villas
- Blocks of flats
- Business facilities
- Office facilities
- Hospitals
- Schools
- Military facilities
- Factories
- Smart cities...



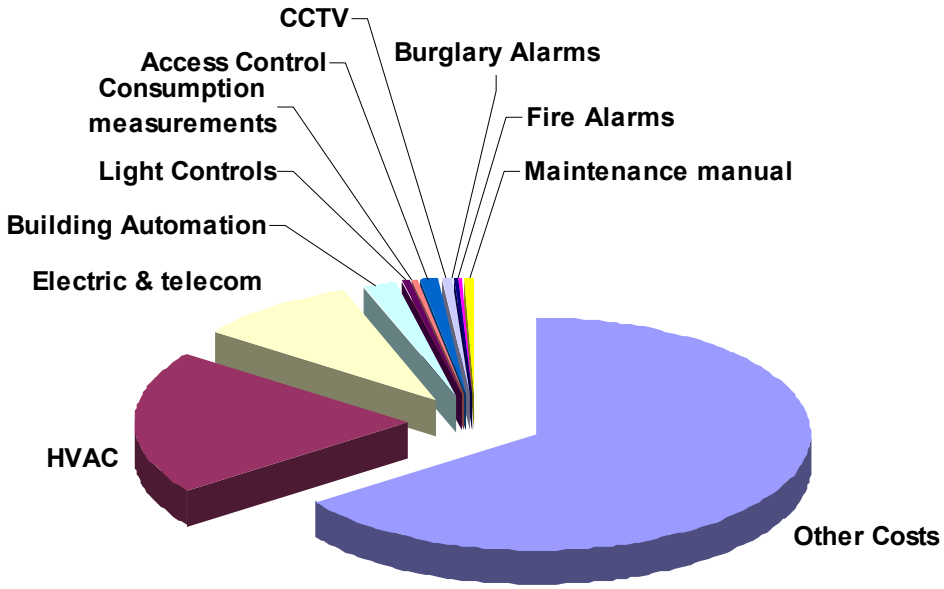

# Energy efficiency with Lonix technologies

1. Needs and situations
2. System integration
3. Easy and secure access to building functionality

Building Connectivity

# All systems function according to needs and situations

# Building management systems




BMS forms 5-6 % of the investment in office buildings

(1980 < 1%, 1990 1-2 %, 2000 3-4 %)


# Needs and situations, example

**USER DEFINED SITUATIONS**

- At home
- Away
- Holiday
- Party
- Night

**AUTOMATIC SITUATIONS**

- Fire
- Burglar
- Leakage
- Dusk
- Bright - dark
- Cold - warm
- Cheap electricity
- etc…

**USER PROFILES**

- Adults
- Kids
- Service personnel
- Maintenance
- etc…

# Example 1

## Coming home

**With one action:**

- **Unlock doors and disarm burglar security system**
- **Ventilation from basic level to need based control**
- **Electricity on**
- **If dark: Basic lighting on**
- **If night: Close curtains**

**Comfort – Security – Energy savings**

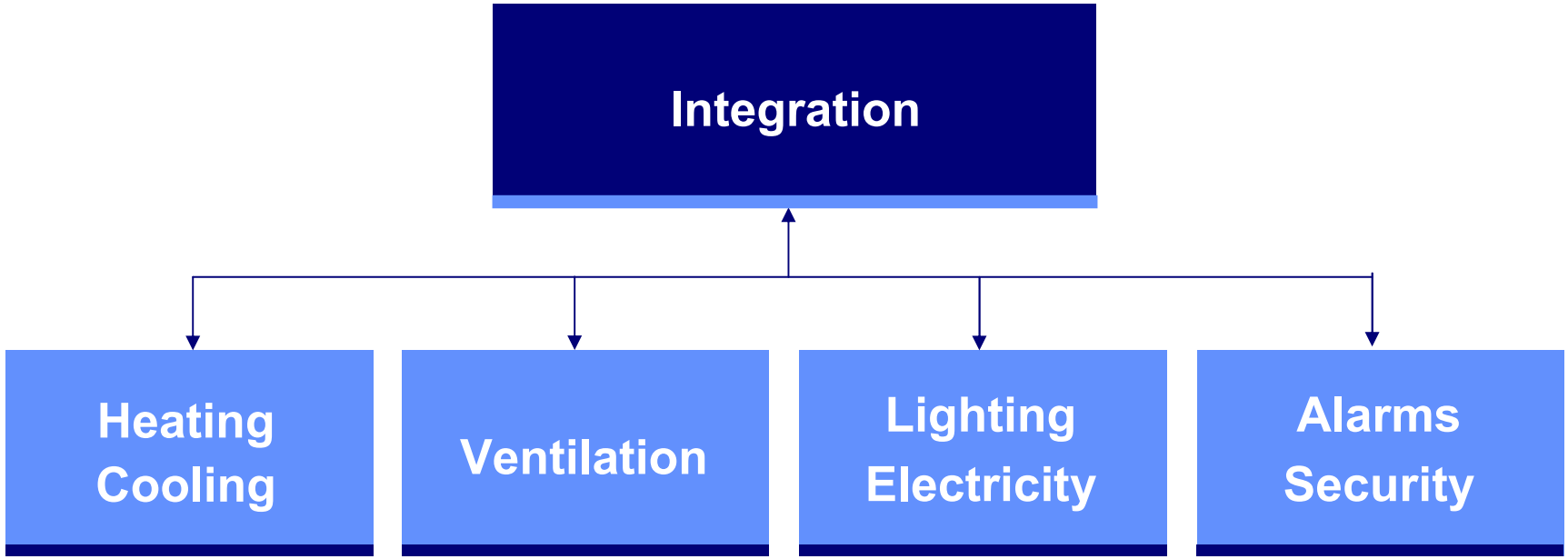
# Example 2

## Automatic situations – fire alarm

- Smoke detector identifies smoke and indicates alarm
- Ventilation is stopped
- Alarm is relayed to required places
- Local siren makes noise

Comfort – Security – Energy savings

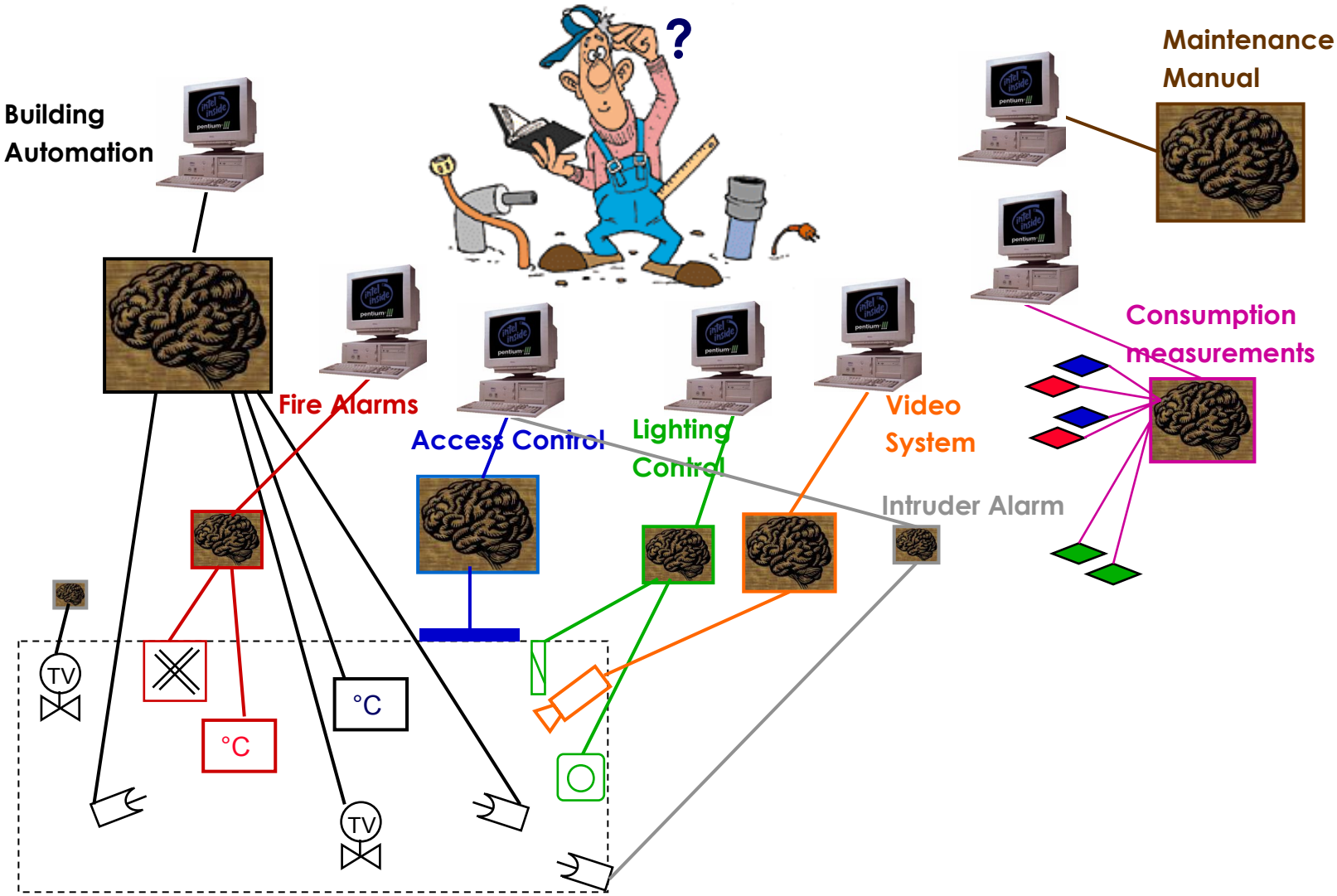
# Integration is an essential requirement for control that is based on needs and situations



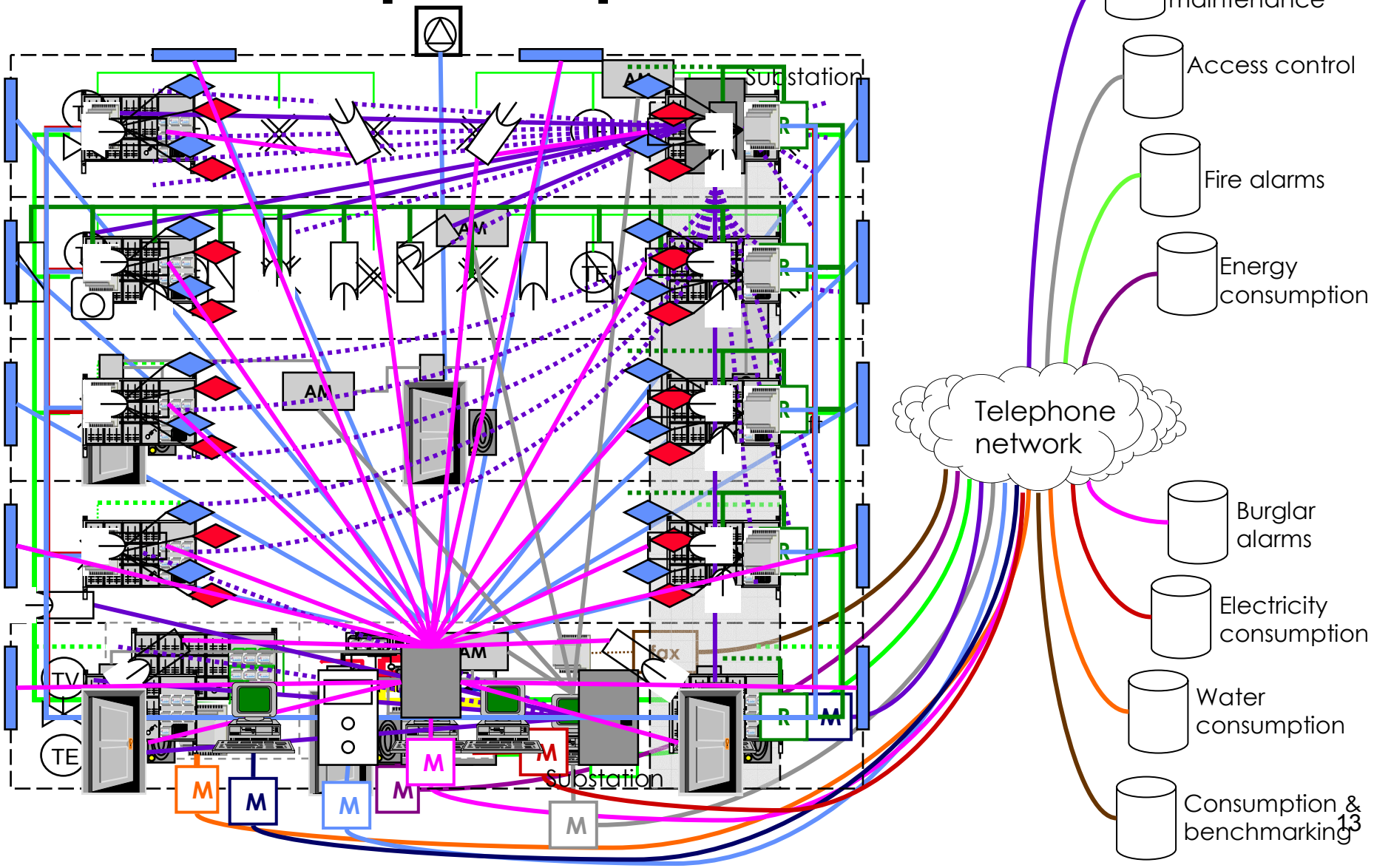


# System integration with the Building Operating System

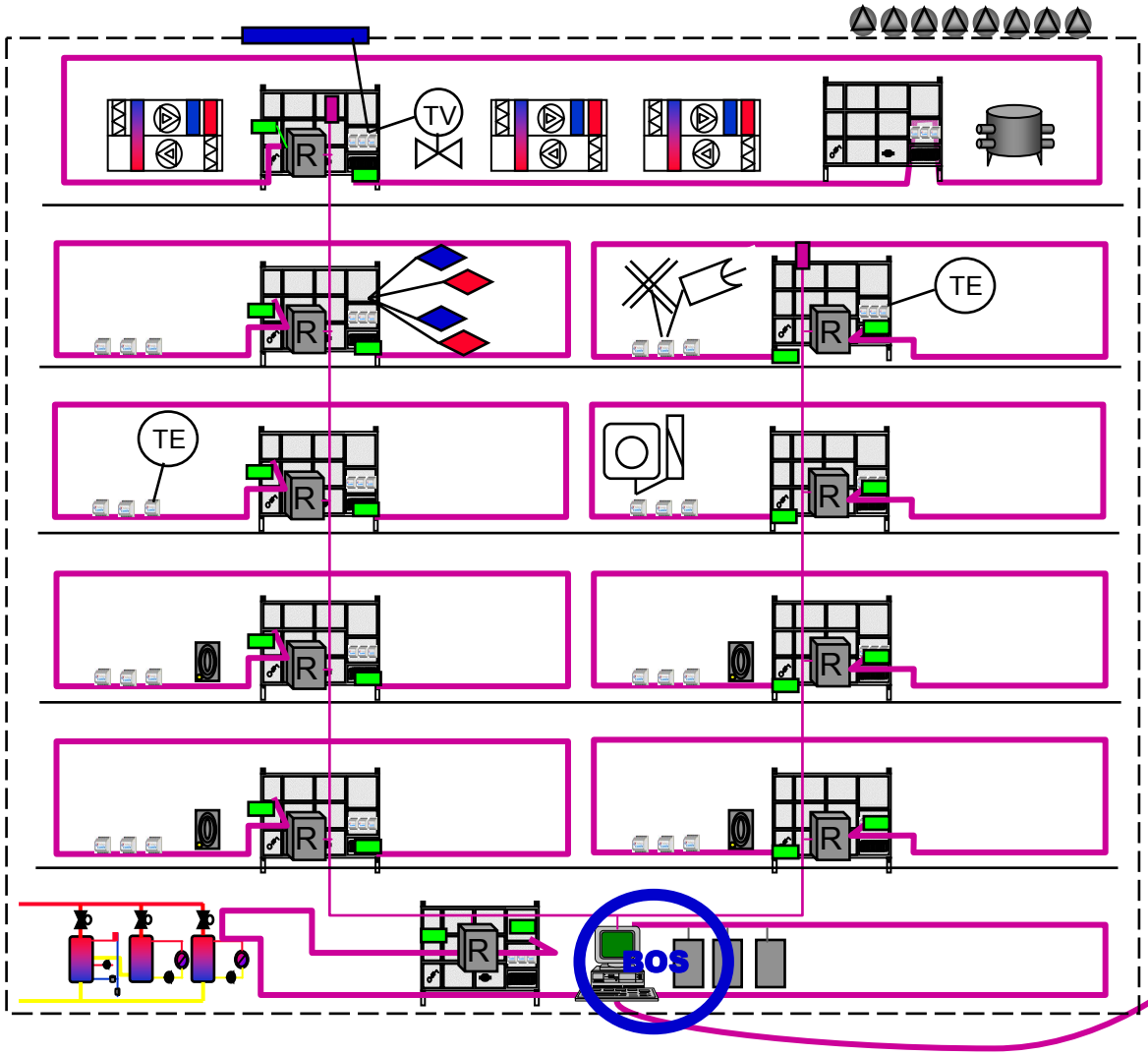
# ICT supported maintenance today



# End result of partial optimization

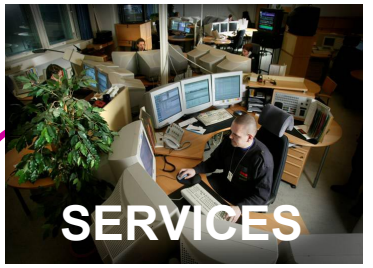


# Integrated and intelligent system, efficient services




Internet

**Maintenance and security services**



# Cost over life cycle

Design and Intelligence

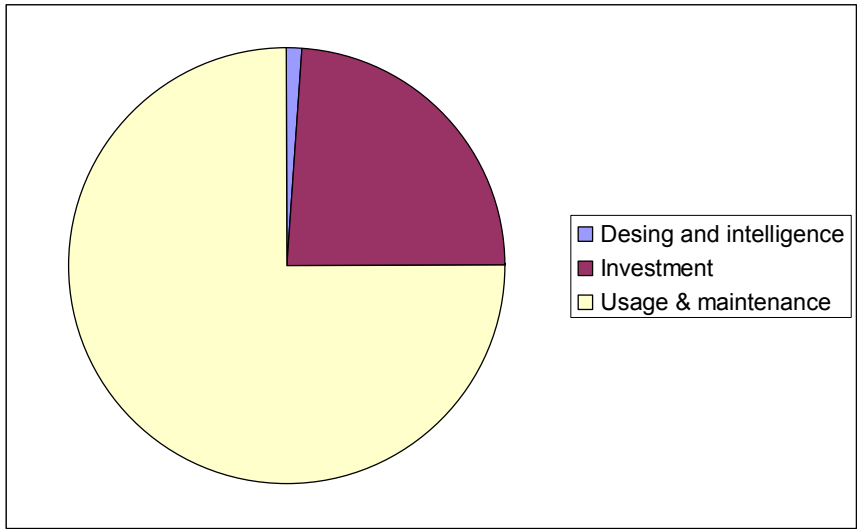
vs

Facility investment

vs

Usage and maintenance cost:

1– 24 – 75 *

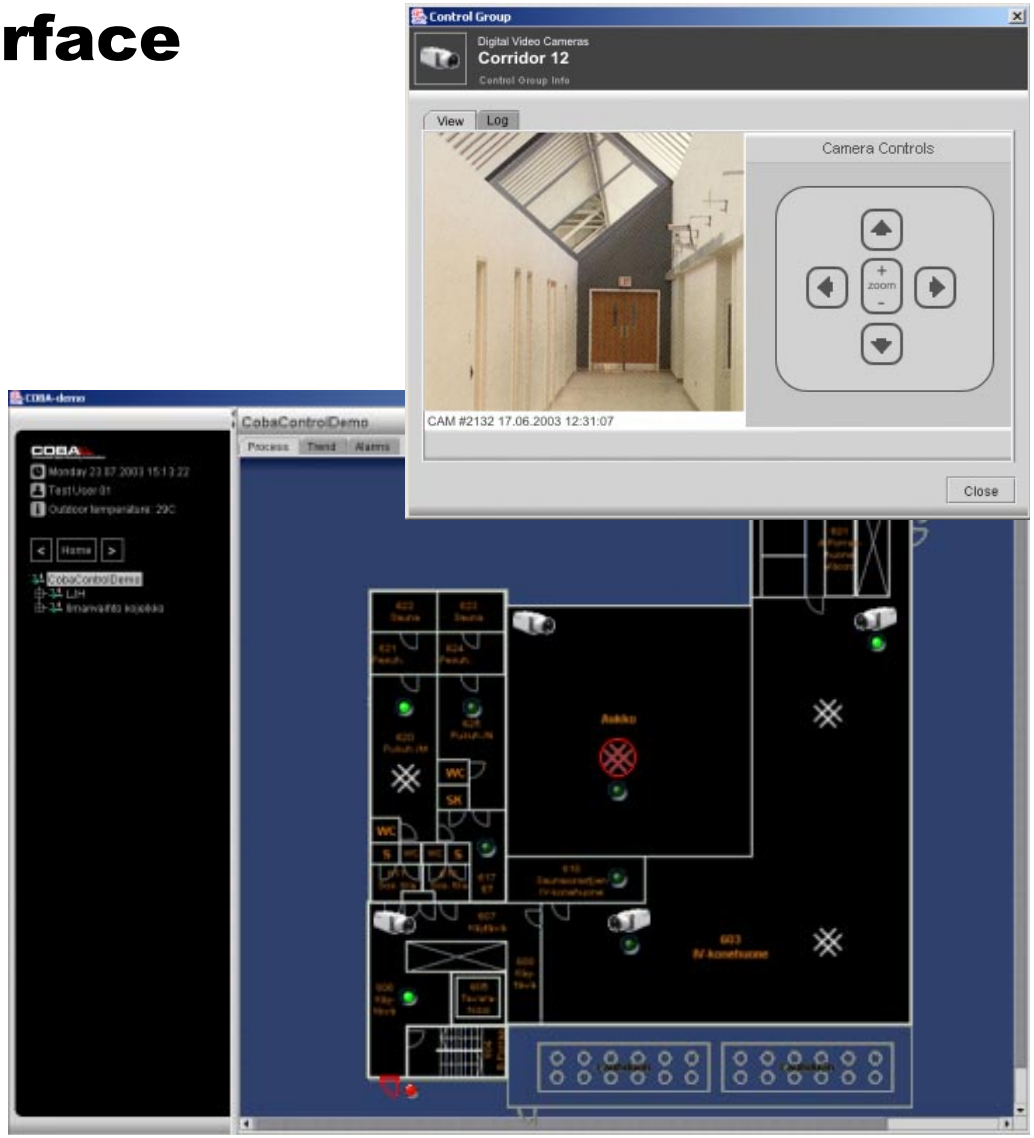



* Estimation based on Finnish facts


# Easy and secure access to building functionality through BOS

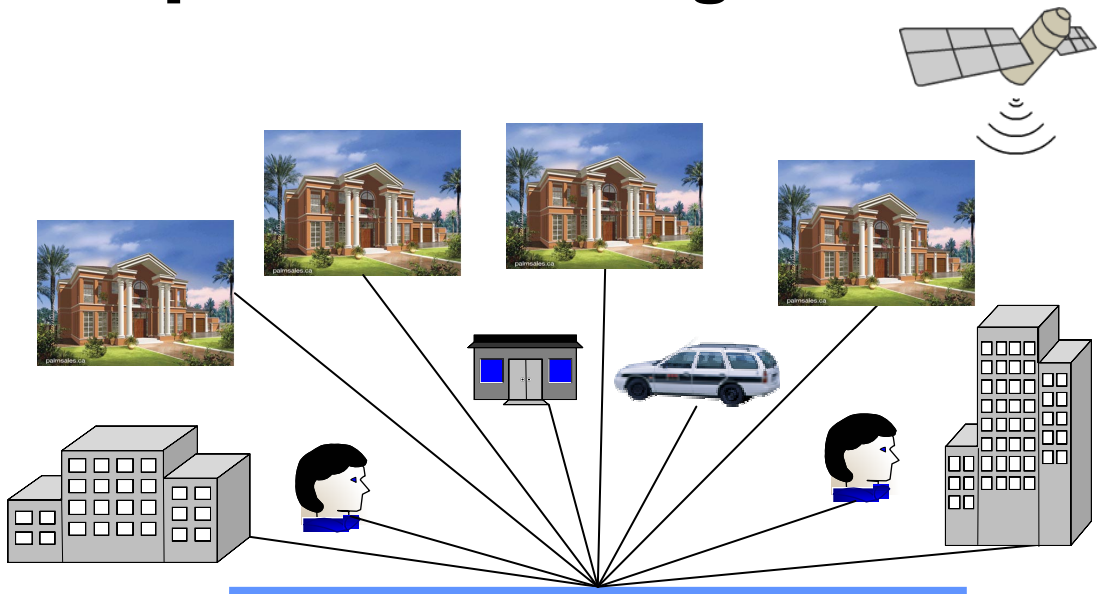
# One common user interface

- Heating
- Cooling
- Ventilation
- Lighting
- Emergency lighting
- Access control
- Video monitoring
- Burglar alarms
- Fire alarms
- Humidity alarms
- Consumption measurements



# Very efficient service provision through BOS

1. Alarm monitoring
   - Intruder alarms
   - Fire alarms
   - Maintenance alarms
   - Advanded video monitoring
   - All alarms trigger corrective action
2. Help desk
   - Call center
3. Energy optimization and trending
   - Setpoint adjustment
   - Control optimization
   - Trending
   - Preventive maintenance
4. Consumption based billing
   - Remote reading and automatic reporting
   - Billing services
5. Remote diagnostics of all devices
   - Immediate feedback from all devices
   - Quick replacement of faulty units
   - Regular SW updates
6. Tracking
   - Guards
   - Maintenance personel
   - VIPs
   - Objects
7. Access rights managment
   - Physical access rights
   - Virtual access rights
8. Documentation and training



# Energy efficiency with Lonix technologies

1. Function according to needs and situation
2. Integrated systems with BOS
3. Easy and secure access to building functionality